

What is claimed is:

1. An aqueous dispersion for nail enamel, comprising a copolymer (E) having a weight-average molecular weight, as determined by gel-permeation chromatography, of 10,000 or more and 40,000 or less as polystyrene, the copolymer (E) is obtainable by polymerizing a total of 100 wt parts of a monomer (A) selected from the group consisting of tert-butyl (meth)acrylate, cyclohexyl (meth)acrylate and benzyl (meth)acrylate and a radical-polymerization unsaturated monomer (B) other than the monomer (A) in an aqueous medium in the presence of 0.1 to 10.0 wt parts of a mercaptopropionic acid derivative (C) represented by the following General Formula (1):

General Formula (1)  $(\text{HS}-\text{CH}_2-\text{CH}_2-\text{COO})_n-\text{R}$

wherein, n is an integer of 1 to 4; and R represents an alkyl group having 4 or more carbon atoms or an alkoxyalkyl group having 4 or more carbon atoms when n is 1 and an n-valent organic residue when n is 2 to 4.

2. The aqueous dispersion for nail enamel according to Claim 1, which is obtainable by emulsion polymerization by using an anionic emulsifier (F) having one or more unsaturated radical-polymerization groups.

3. The aqueous dispersion for nail enamel according to Claim 1 or 2, wherein the monomer (A) is contained in an amount of 1 to 50 wt % with respect to a total of 100 wt % of the monomer (A) and the radical-polymerization unsaturated monomer (B) other

than the monomer (A).

4. The aqueous dispersion for nail enamel according to any one of Claims 1 to 3, wherein the glass transition temperature (T<sub>g</sub>) of the copolymer (E) is 50 to 80°C.

5. The aqueous dispersion for nail enamel according to any one of Claims 1 to 4, wherein the mercaptopropionic acid derivative (C) is octyl mercaptopropionate.

6. The aqueous dispersion for nail enamel according to any one of Claims 1 to 5, wherein the average particle diameter of the copolymer (E) is 30 to 100 nm.

7. A method of producing an aqueous dispersion for nail enamel comprising a copolymer (E) having a weight-average molecular weight, as determined by gel-permeation chromatography, of 10,000 or more and 40,000 or less as polystyrene, which comprises: polymerizing a total of 100 wt parts of a monomer (A) selected from the group consisting of tert-butyl (meth)acrylate, cyclohexyl (meth)acrylate and benzyl (meth)acrylate and a radical-polymerization unsaturated monomer (B) other than the monomer (A) in an aqueous medium in the presence of 0.1 to 10.0 wt parts of a mercaptopropionic acid derivative (C) represented by the following General Formula (1):

General Formula (1)  $(\text{HS}-\text{CH}_2-\text{CH}_2-\text{COO})_n-\text{R}$ ,

wherein R represents an alkyl group having 4 or more carbon

atoms or an alkoxyalkyl group having 4 or more carbon atoms when n is 1 and an n-valent organic residue when n is 2 to 4.

8. An aqueous nail enamel composition, comprising the copolymer (E) according to any one of Claims 1 to 6 in an amount of 10 to 60 wt %.

9. The aqueous nail enamel composition according to Claim 8, further comprising a lower alcohol having a boiling point of lower than 100°C in an amount of 0.5 to 15 wt %.

10. An aqueous dispersion for nail enamel, comprising a copolymer (E) dispersed in an aqueous medium, the copolymer (E) having a weight-average molecular weight of 10,000 or more and 40,000 or less, formed from a monomer (A) selected from the group consisting of tert-butyl (meth)acrylate, cyclohexyl (meth)acrylate and benzyl (meth)acrylate and a radical-polymerization unsaturated monomer (B) other than the monomer (A) as the constituent units, and having a mercaptopropionic acid derivative represented by the following Formula (I) at the terminal thereof:

General Formula (1)  $(\text{HS}-\text{CH}_2-\text{CH}_2-\text{COO})_n-\text{R}$ ,

wherein R represents an alkyl group having 4 or more carbon atoms or an alkoxyalkyl group having 4 or more carbon atoms when n is 1 and an n-valent organic residue when n is 2 to 4.